

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

RTD UPDATES: Early-Season Water Supplies

Data updates for employees and colleagues of the Resources and Technology Division

Resources and Technology Division
Economic Research Service
U.S. Department of Agriculture

June 1992

Crop Moisture Sources Monitored To Identify Production Problems

Crop production depends on adequate soil moisture. To help identify production problems and potential areas of policy action, RTD monitors indicators of crop water supplies from various sources. This **RTD Update** provides information on early-season moisture conditions for the 1992 crop season.

The Palmer Drought Index (PDI) identifies areas affected by long-term abnormal dryness or wetness, rather than current moisture available for crop production. The PDI maps in figure 1 clearly show the prolonged drought in the West, heavy 1992 rainfall in parts of the South, and the swing from moist to drought in portions of the eastern Corn Belt. Drought areas will require timely rains or irrigation water applications for normal crop production.

Surface water sources (current streamflow and past streamflow stored in reservoirs) serve about half of the

irrigated acres in the West. Figure 2 presents the 1992 summer streamflow forecast based on actual snowpack and normal summer precipitation in the 11 Western States. Projected streamflow is much below normal for almost all of the West, with expected normal flows limited to portions of Colorado and New Mexico.

May 1 reservoir storage represents spring snowpack runoff, winter rains, and carryover from previous years. Figure 3 shows that 7 of 11 States' irrigation reservoir storage levels are below normal again this year. States with the most critical storage conditions are Nevada (14% of normal), Oregon (54%), California (72%), and Utah (72%).

Crop production will suffer in areas with long-term drought conditions, below normal reservoir storage, and a much below normal streamflow forecast. These conditions currently exist, for example, in western Nevada, northern California, and southeastern Oregon.

A more current look at topsoil moisture conditions is provided by the crop moisture map in figure 4. This map suggests that, as of June 6, the drought persists in the West while areas of the Southern Plains have had excessive rain. The Midwest and Eastern States begin the crop year with sufficient topsoil moisture.

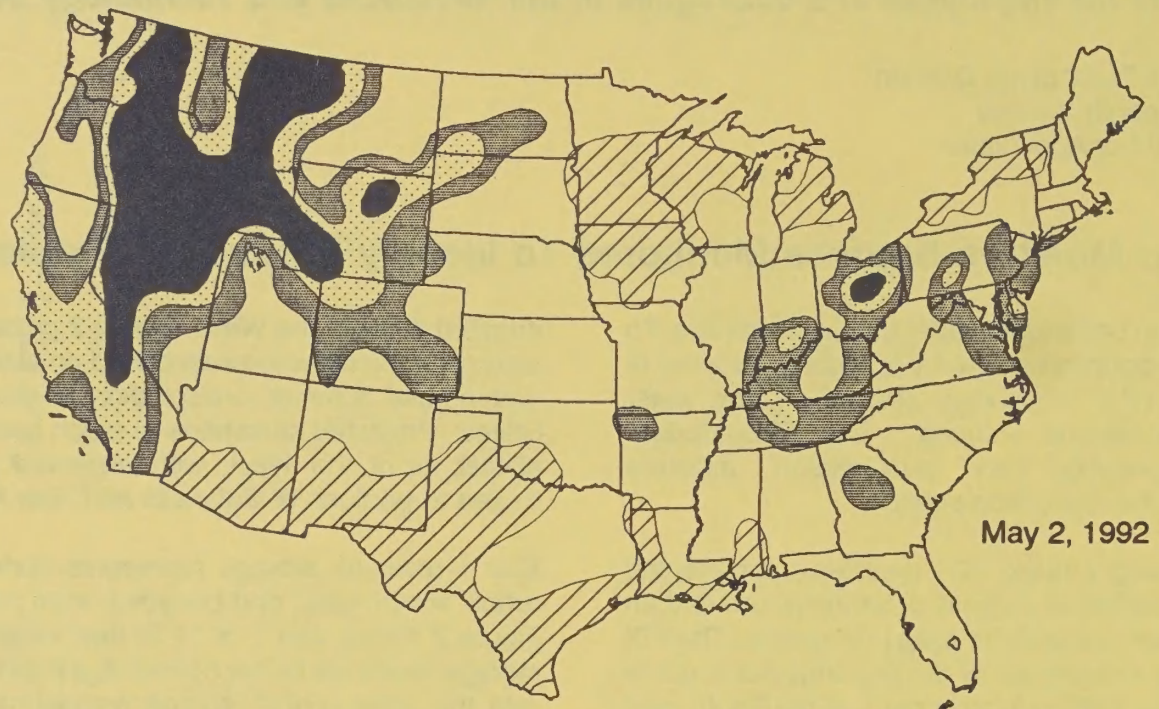
Updated estimates of short-term crop moisture conditions and the Palmer Drought Index are available in the **Weekly Weather and Crop Bulletin** published by the NOAA/USDA Joint Agricultural Weather Facility. Spring snowpack, runoff, and reservoir information is published by NOAA/USDA-Soil Conservation Service in **Water Supply Outlook** reports. Additional information on irrigation water supplies and irrigated acres is available in ERS's **Agricultural Resources: Cropland, Water, and Conservation Situation and Outlook** report published annually in the fall.

Further information: Noel Gollehon or Marcel Aillery, Water Branch, RTD (202)219-0410.

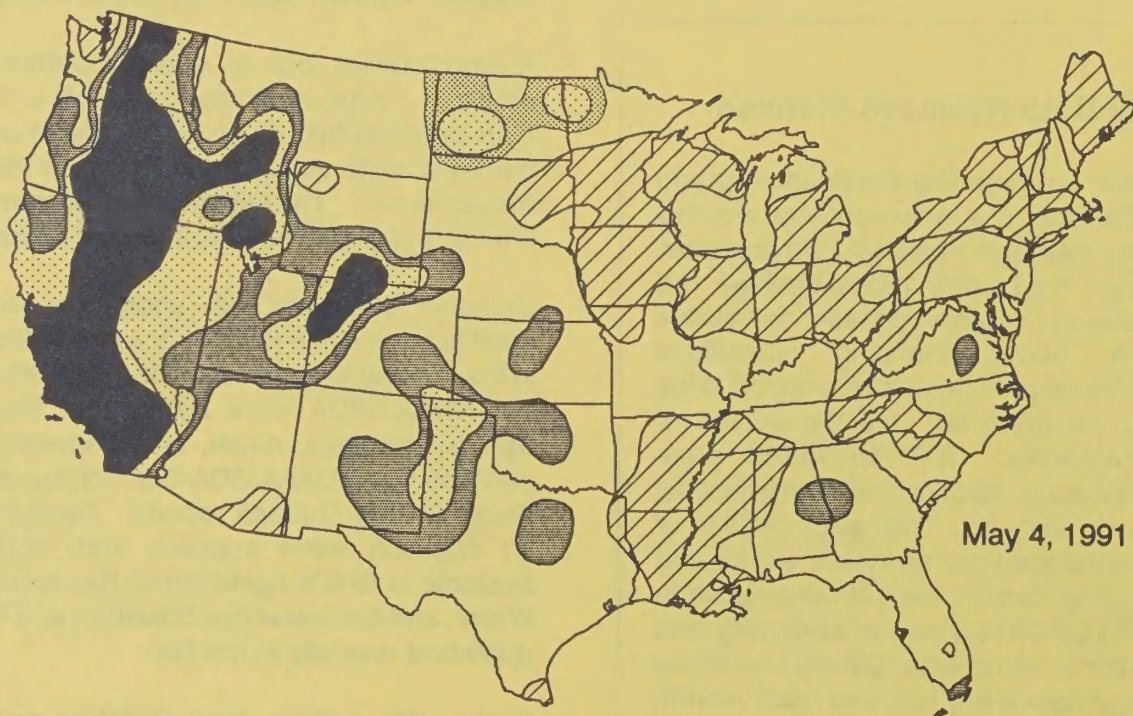
Monthly Data Releases Planned

RTD UPDATES, published by the Resources and Technology Division, is a new series of monthly data highlights relating to agricultural resources, the environment, food safety, global change, and technology. Surveys of farm operators and others knowledgeable about changing agricultural resource conditions provide vital information to the RTD research program and are the source of these data highlights. **RTD UPDATES** gives readers recent data acquisitions, with only minimal interpretation or analysis. This quick release of data should enhance your analytical efforts and decisions. Please contact the individual listed in the text of **RTD UPDATES** on the availability and timing of additional information. Different resource and technology issues are featured each month, depending on availability of data.

Figure 1. Drought-Affected Areas Based on Palmer Drought Index, 1991 and 1992

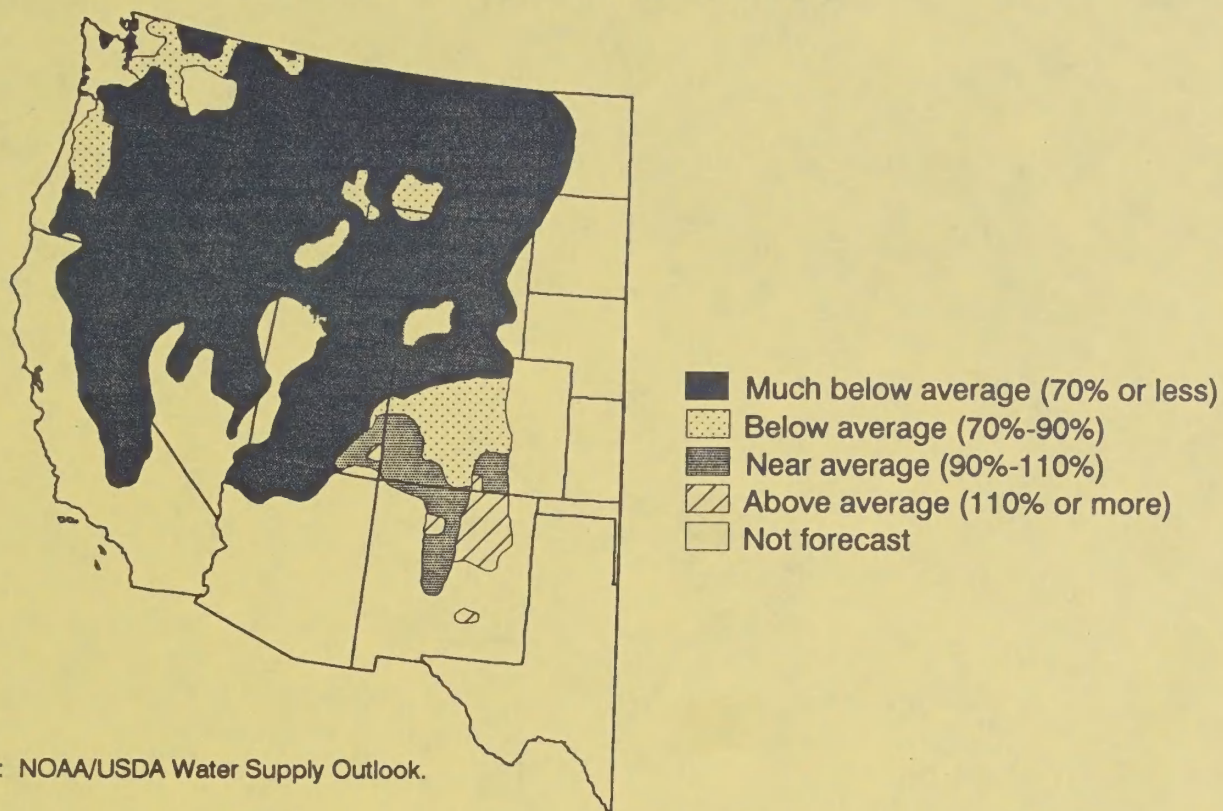


- Extreme drought
- ▤ Severe drought
- ▨ Moderate drought
- Near normal conditions
- ▧ Moist conditions



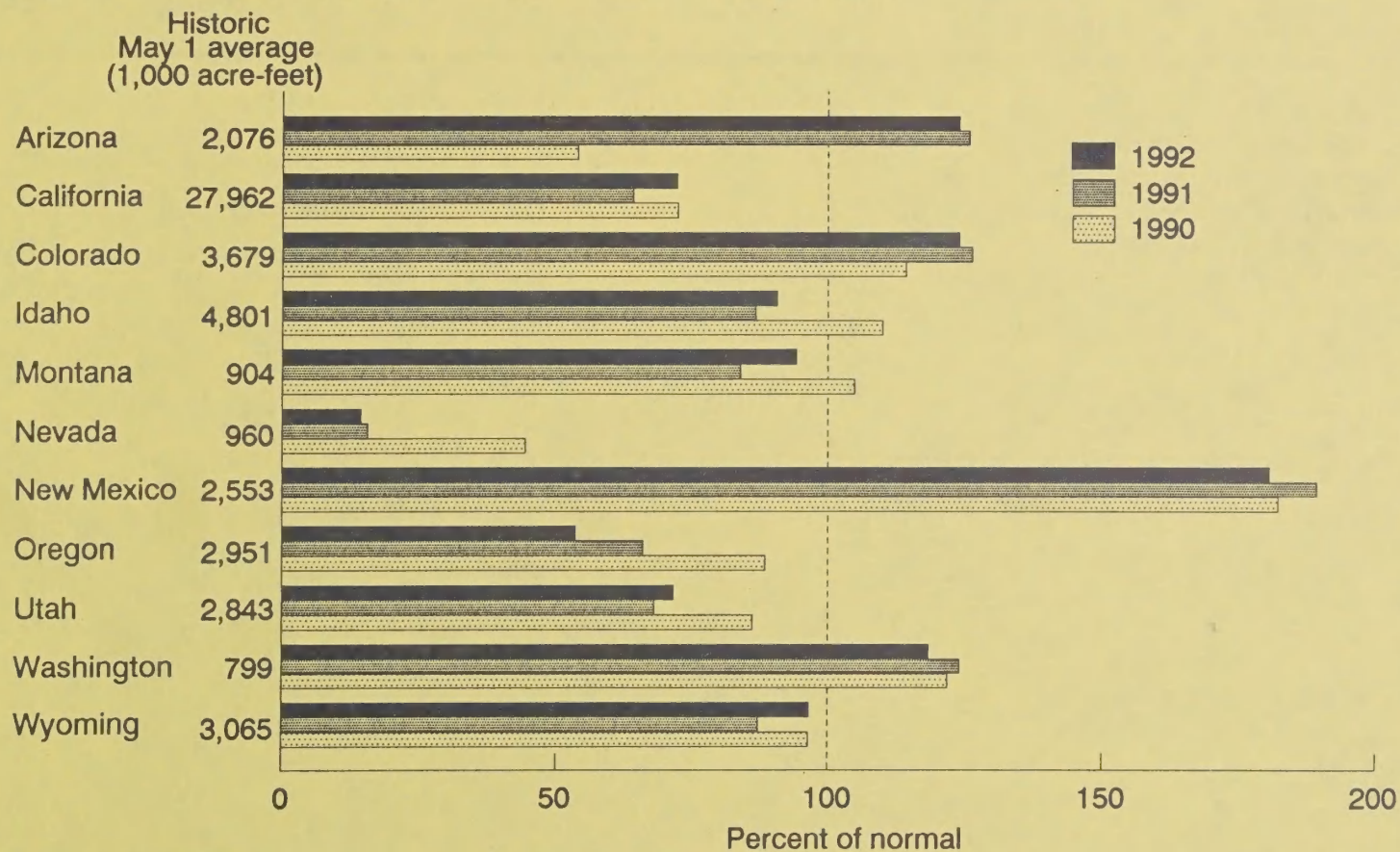
Source: NOAA/USDA Joint Agricultural Weather Facility

Figure 2. Western Streamflow Forecast for Summer 1992, as of May 1



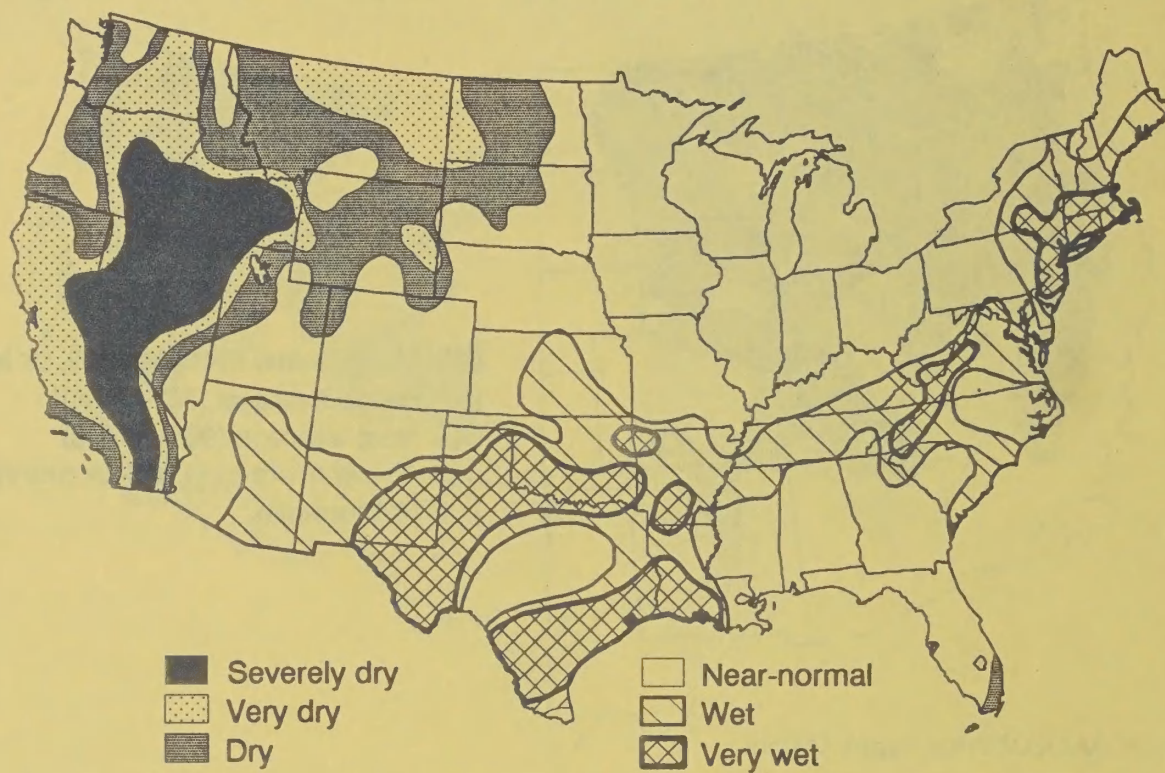
Source: NOAA/USDA Water Supply Outlook.

Figure 3. Reservoir Storage in 11 Western States, May 1, 1992



Source: USDA/SCS Central Forecast System and California Department of Water Resources.

Figure 4. Short-term Topsoil Moisture for Crop Production, June 6, 1992



Source: NOAA/USDA Joint Agricultural Weather Facility

RTD UPDATES

Economic Research Service

U.S. Department of Agriculture

1301 New York Avenue, N.W., Room 524

Washington, DC 20005-4788